TWO-CONSOLE (One Local, One CAT5 Remote) 8 port / 16 port

19" RACK MOUNTABLE PS/2 KVM SWITCH

USER'S MANUAL

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Introduction

Thank you for purchasing Two-Console PS/2 KVM switch. Two-Console PS/2 KVM switch can save your MONEY, TIME, SPACE, EQUIPMENT and POWER.

The Two-Console switch controls multiple PCs from One Keyboard, Mouse and VGA Monitor with complete keyboard and mouse emulation for simultaneous PCs boot-up process. It has various features such as one local console port and one up to 500-feet away CAT5 console port, 19" Rack Mount Size, Daisy Chain up to 8 units, On Screen Display Menu, Password security, searching PC server name, Hot key Control, Push Button and Auto Scan Control. It has

The CAT5 console port extends PC, SERVER up to 500 feet away from your controlling keyboard, mouse and VGA monitor. "KVM CAT5 transmitter" is built-into KVM switch inside. It synthesizes PS/2 keyboard signal, PS/2 mouse signal and VGA monitor signal to be easily transmitted to a long distance over popular Ethernet CAT5 cable. The "Cat5 Remote Console Receiver" is to get the synthetic signal and return it back to PS/2 keyboard, PS/2 mouse and VGA monitor signal. Besides, "Cat5 Remote Console Receiver" allows the other PC to share this remote console via one extra PC port which is built in the receiver.

"Cat5 Remote Console Receiver" is a good solution for those noisy server room environment where is unsuitable for people to work for a long time, besides, it facilitates effective management on dispersive computers through one dedicated central control room, demonstration room, meeting room, or at your desk. CAT5 STP cable (Shielded Twisted Pair)/ UTP cable (Unshielded Twisted Pair) or enhanced cable like CAT5E/CAT6 cable is applied to LAN network popularly. KVM-CAT5 Extra uses the same existing network construction to transfer local console signal to remote side.

"Cat5 Remote Console Receiver" allows you to move your console, i.e. Keyboard, Mouse and VGA monitor, to a suitable place for centralized control conveniently over LAN network. You just need install a CAT5 remote console receiver at the remote side you would like to locate or to share one of remote PC's consoles. It also saves your cable layout and cable installation cost.

Two-console KVM switch is able to work with single console KVM switch. It is highly recommended to put two-console KVM switch at master bank and the single KVM switch at slave banks.

Features

- 8/16 port Two-Console PS/2 KVM switch is 19" rack mount size design.
- Support one local console and one CAT5 remote console up to 500 feet away from KVM switch.
- Support Microsoft Intellimouse, Microsoft Intellimouse Explorer, Logitech Net Mouse or the other fully compatible MS mice.
- Support DOS, Win3.X, Win95/98/98SE/2000/ME/XP, WinNT, Netware, Unix, Linux
- Support iMAC, Power MAC and Sun Microsystems with USB port (Need work with USB-PS/2 adapter)
- Hot Plug Add PCs or Remove Connected PCs for Maintenance without Powering off the KVM switch or PCs.
- Very High Video Quality Up To 1920X1440, Bandwidth: 200MHz
- No Software Required easy PC selection via On Screen Display Menu, Push Buttons, and Hot Keys
- Support eight-character password protection and PC server name searching
- Auto Scan Mode for monitoring PCs with flexible Scan time from 5~99 seconds
- Keyboard status restored when switching PCs
- LED Display for easy status monitoring
- Buzzer sound for switching port confirmation.
- Built-in one extra daisy chain port without wasting any PC port
- No DIP switch setting needed and auto detect daisy chain bank

PACKAGE CONTENTS

Model No.: Two-console 8 port PS/2 KVM Switch

8 port PS/2 KVM Switch	1 PC
CAT 5 Remote Console Receiver	1 PC
Power Adapter DC9V,500mA (for KVM Switch)	1 PC
Power Adapter DC9V,500mA (for CAT5 Remote Console Receiver)	1 PC
Rack Mount Kit	1 SET
User's manual	1 PC

Model No.: Two-console 16 port PS/2 KVM Switch

16 port PS/2 KVM Switch	1 PC
CAT 5 Remote Console Receiver	1 PC
Power Adapter DC9V,500mA (for KVM Switch)	1 PC
Power Adapter DC9V,500mA (for CAT5 Remote Console Receiver)	1 PC
Rack Mount Kit	1 SET
User's manual	1 PC

Technical Specifications

Model No.	Two-console 8 port PS/2 KVM Switch	Two-console 16 port PS/2 KVM Switch	
PC Port	9 (8 local and 1 remote)	17 (16 local and 1 remote)	
Console Port	2 (1 local and 1 remote)	2 (1 local and 1 remote)	
PC Port Connector	VGA HDDB 15pin (shared with PS/2 keyboard and Mouse)		
(All Female Types)			
Console Port Connector	Local Console: PS/2 Keyboard Mini Din 6 pin		
(All Female Types)	PS/2 Mouse Mini Din 6 pin		
	VGA HDDB 15pin		
	Remote Console: RJ-45 8P8C		
Daisy Chain Port Connector	PS/2 Keyboard mini Din 6 pin		
(All Female Type)	PS/2 Mouse Mini Din 6 pin		
DO salastias	VGA HDDB 15pin	D. H	
PC selection	On Screen Display Menu, Hot Key, Push		
PC Port LED	16	32	
Bank 7 segment LED	1		
On Screen Display Control	Yes		
Scan Intervals	5~99 Sec.		
Keyboard Emulation	PS/2		
Mouse Emulation	PS/2		
VGA Resolution	1920X1440		
Bandwidth	200MHz		
Daisy Chain MAX Level	8 levels		
MAX PC Connection	121 (120 local and 1 remote) 129 (128 local and 1 remote)		
Housing (KVM Switch)	Metal		
Housing (CAT5 Receiver)	Plastic		
KVM Switch Power Adapter	DC 9V, 500mA		
Cat5 Remote Console	DC 9V, 500mA		
Receiver Power Adapter			
Operation Temperature	0~50℃		
Storage Temperature	-20 ~ 60°C		
Humidity	0~95%, Non-Condensing		
Size	19" Rack Mount / 1RU	19" Rack Mount / 1RU	
Weight (g) (KVM Switch)	2010	2220	
Weight (g) (CAT5 Receiver)	120	120	
Dimension (cm) (KVM Switch)	41(L) X 16.4(W) X 4.5(H)	41(L) X 16.4(W) X 4.5(H)	
Dimension (cm) (CAT5	11.15(L)x7.5(W)x3.95(H) 11.15(L)x7.5(W)x3.95(H)		
Receiver)			

System Requirements

Model No.	Two-console 8 port PS/2 KVM Switch
Local Console	One VGA Monitor
side	One PS/2 Keyboard
	One PS/2 Mouse
	One DC9V 500mA power adapter
Remote Console	One CAT5 cable
side	One KVM CAT5 receiver
	One DC9V 500mA power adapter
	One VGA Monitor
	One PS/2 Keyboard
	One PS/2 Mouse
	One 3-in-one KVM cable
Computer side	8 HDDB 15 pin male to one HDDB 15 pin
	and Mini Din 6 pin special cables

Model No.	Two-Console 16 port PS/2 KVM Switch
Console side	One VGA Monitor
	One PS/2 Keyboard
	One PS/2 Mouse
	One DC9V 500mA power adapter
Remote Console	One CAT5 cable
side	One KVM CAT5 receiver
	One DC9V 500mA power adapter
	One VGA Monitor
	One PS/2 Keyboard
	One PS/2 Mouse
	One 3-in-one KVM cable
Computer side	16 HDDB 15 pin male to one HDDB 15 pin
	and Mini Din 6 pin special cables

Cable Diagrams

PC Port Special Cable:

HDDB15 pin male to one HDDB 15 pin male and Mini Din 6 pin special cables











AT to PS/2 keyboard adapter: (Optional)

Din 5 pin Male to Mini Din 6 pin Female





Daisy Chain Cable:

PS/2 Cable:

Mini Din 6 pin Male to Male









VGA Cable:

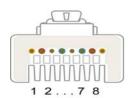
HDDB15 pin Male to Male



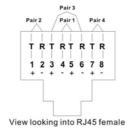


CAT5/5E/6 Straight Through UTP/STP Cable:

8P8C



Pin	Wire Color	Pair	Function
1	White/Orange	2	Т
2	Orange	2	R
3	White/Green	3	Т
4	Blue	1	R
5	White/Blue	1	Т
6	Green	3	R
7	White/Brown	4	Т
8	Brown	4	R



Product Details

Two-console 8 port PS/2 KVM Switch:



Two-console 16 port PS/2 KVM Switch:



Hardware Installation

Before installation, please make sure all of peripherals and computers have been turned off. The installation of below is based on 8 port-Rack Mount KVM Switch. Please follow the same installation procedure for 4 and 16 port Rack Mount KVM Switch.

Step 1

Find a convenient place to put your KVM Switch. Its 19" rack mount form factor makes it ideal to be mounted on 19" rack. When mounting to a rack, attach the included brackets to the sides of the KVM Switch. Take note of the length of your cables so that your computers, KVM Switch, keyboard, mouse and monitor are distanced properly.



Step 2 (Local Console)

Connect the monitor to the KVM Switch. Connect the attached cable, or the one included with your monitor, to the HDDB-15 female port on the back of the KVM unit marked with the monitor symbol at the CONSOLE connector.





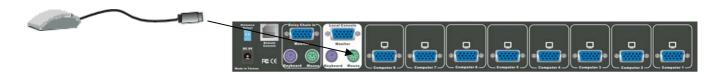
Step 3

Connect the keyboard to the KVM Switch. If you have an AT type keyboard, you will need an AT to PS/2 adapter.



Step 4

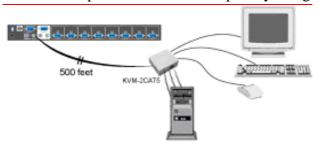
Connect the mouse to the KVM Switch.



Step 4-1 (Remote Console)

Extending your PC console up to 500 feet away:

- (1) To make sure the CAT5 cable is straight through type.
- (2) Plug one end of the CAT5 cable into RJ-45 connector of PS/2 KVM switch and the other end into KVM CAT5 receiver RJ-45 port.
- (3) Connect remote keyboard, mouse and monitor with PS/2-EXTENDER-RECEIVER "KB", "MS" and "Monitor" interface.
- (4) Connect CAT5 receiver PC port with PC console port by using 3-in-one KVM cable.



NOTE:

1. Local console and Remote console of KVM Switch will have the same priority to control computer, just like a PC connected to two consoles. The remote console can control both the local PC and remote PC connected to KVM switch; however, the local console can only control the PCs on local side. There will be a conflict, if the local console and remote console access the computer simultaneously. Please don't use local console and

remote console at the same time.

- 2. When the video signal is foggy or un-cleared on the screen, please check if VGA connector is connected properly, or the VGA resolution is too high for the length of cable being used. If the problem happened at VGA resolution, please shorten the CAT5 cable length or reduce VGA resolution. It is highly recommended to use "optimal CAT5 cable length "to get the best video quality and don't waste unnecessary CAT5 cable. High VGA resolution is up to 1280X1024 and CAT5 cable length could up to 500 feet approximately.
- 3. There is a Dip Switch on the rear site of KVM switch. The factory default value is "OFF/OFF" state. When you use the CAT5 cable length is over 300 feet, please set DIP Switch to "ON/ON" state. The other setting likes "ON/OFF" or "OFF/ON" state is reserved for future application.

Step 5

PC port connectors of the KVM switch are HDDB-15 pin type. Plug one end of the calbe which is HDDB-15 pin male connector to the selected computer port on the rear of KVM switch unit. The other end of cable which have three connectors: a HDDB-15 pin male type for PC video, a Mini Din 6 pin female type for keyboard and a Mini Din 6 pin female type for mouse, will be attached to keyboard, mouse and monitor ports of computer respectively. Repeat the same procedure to all of PCs.

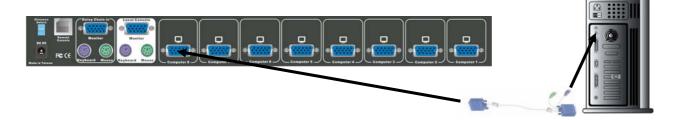
The Rear Side of PC



Step 6 (Optional)

If your computer has an AT type keyboard port (Din 5 pin), you will need a PS/2 to AT keyboard adapter.

The Rear side of PC



Step 7

Check all of the connections carefully. The colors of keyboard and mouse connectors will help to make sure the keyboard and mouse cables go to the correct ports.

Step 8

Attach the power supply to the KVM unit and plug the other end into an electrical receptacle.

Now you will see the LED for Port 1 light up, and you will hear a beep. Switch on your monitor.

NOTE:

It is suggested to plug in power adapter, although the PCs connected to KVM Switch are able to support enough power to the stand alone switch. However, KVM Switch will need a power adapter to daisy chain more banks and if you forget to plug in power adapter on the status of daisy chain, it may cause unexpected consequence.

Usage

The power on state of two-console 4/8/16 port KVM switch:

When you power on KVM switch, it will ask you the password, the default password value is eight zero - "00000000". Please key in eight zero and enter the same value at re-type field.

Note: Don't change the password and keep default eight zero (00000000) value until you are familiar with the operation of OSD menu. If unfortunately, you forget the password that has been set, you will need send it back to your distributor to maintain the password.

The Membrane Buttons :



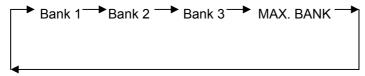
Pressing the individual button cyclically through all the ports or the respective button to get PC port you want. For 16 port KVM Switch, please press "→" and individual button simultaneously in order to select the port 9 to port 16.

PC port LED Indicator:

When the selected PC port is disconnected to PC or PC connected is shut down, the selected PC port LED will flash. When you select one of the PC ports that is powered on, the selected PC port LED is lit.

7-Segment BANK LED Indicator

To view the next bank KVM switch, please press "BANK" push button cyclically for the destination bank. The LED indicator for bank no. will be changed from bank 1 to the maximum daisy chain level and then to press "BANK" push button once back to the bank 1.



(" Bank " button) and

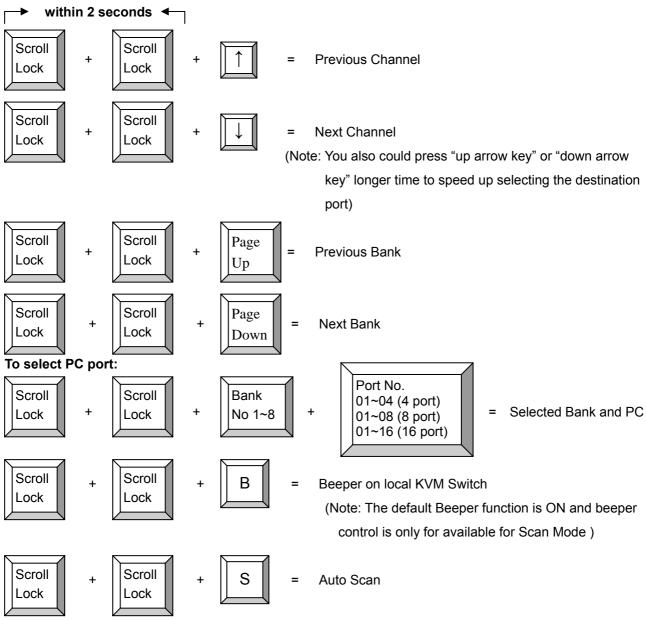
To reset the KVM switch, please press both "PC8" button and "bank" button of master bank simultaneously. This reset action will not only return KVM switch back to initial state, i.e. Check the password, but also re-check all of slave banks which connected to master KVM Switch.

If you add a new KVM Switch as a slave bank, please use reset button of master KVM Switch to automatically assign a new ID to the new KVM switch. You can view this new slave bank via OSD menu. The PC ports of KVM Switch will not be reset by this reset command.

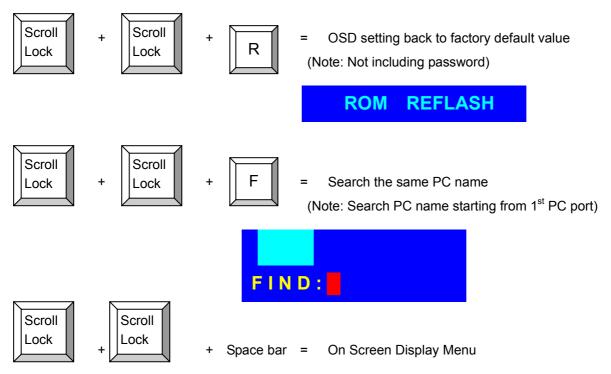
Keyboard Hot Key Commands:

You can also conveniently command KVM switch to switch ports simple via key sequences. To send commands to KVM switch, the "SCROLL LOCK" key must be pressed twice within 2 seconds. You will hear a beep for confirmation and then the keyboard is in hot key mode. If you have not pressed any key in hot key mode within 2 seconds (It means there is no keystroke after "Scroll Lock" "Scroll Lock" key), the keyboard will be back to Operation System control state.

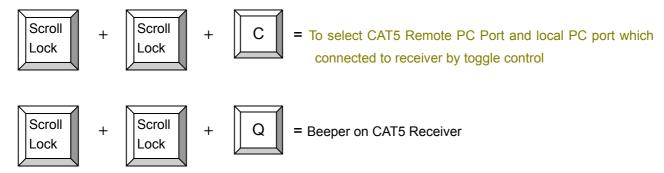
Below are the different hot key commands (for local KVM):



To get out of Auto Scan Mode, Press any key or SPACE bar.



Below are the different hot key commands (for CAT5 remote):



Example:

A. To access a computer attached to Port 4 of Bank 3. You can press through hot key as below:

Scroll lock + Scroll lock + 3 + 04

B. To access a computer attached to next Bank, You can press through hot key as below:

Scroll lock + Scroll lock + Page Down

Note:

Use numeric keys on the keyboard to select Bank no. and Port no. Numeric keys on the keypad are not available as a hot key command.

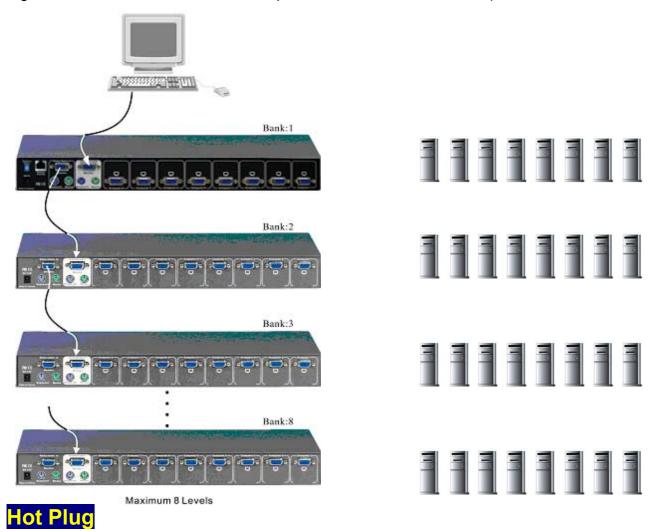
Daisy Chain Connection Diagram

Please use the 3 feet 3-in-one daisy chain Cable Kit to daisy chain the KVM Switch.

A. Connect Keyboard, Mouse and Monitor to the console port (white color block) of bank 1 KVM switch.

- B. Use one end of 3-in-one Cable Kit to connect the daisy chain port of bank 1 and the other end to the console port (white color block) of bank 2 KVM switch.
- C. Please repeat item B to daisy chain more bank as you want. But, the maximum level of daisy chain bank is eight.
- D. While chaining the slave bank up to six banks, you need a VGA extender between the fifth bank and the sixth bank to enhance the VGA signal.

(Note: If you would like to daisy chain 4 port, 8 port, and 16 port PS/2 or USB KVM Switch together, the master bank must be 16 port PS/2 or USB KVM Switch)



The KVM Switch supports "Hot Plug" function for easy addition or removal of PCs. The user can arrange or maintain PCs as follows:

- a. A PC can be disconnected and reconnected to the same or different port of the KVM unit without powering off as long as it is not the Daisy-chain port or pass through port.
- b. To use hot plug function on PC which is powered on before connected to pass through port, (i.e. the console port is connected to PC directly), please switch from the pass through port to next port (or say emulation port) and then switch back to the pass through port.
- c. You may unplug the mouse or the keyboard from the console port and plug it back in at any time.

NOTE:

Some O.S. (Operation Systems) like SCO Unix are unable to support "Hot Plug "function. If you apply "Hot Plug" to this kind of O.S., it will cause unpredictable behavior or shut down the PC. Before using "Hot Plug", please make sure your O.S. and mouse software driver supports the "Hot Plug" function.

On Screen Display Operation

- 1. The OSD menu can work with the PC port that is powered on, powered off or even disconnected. The resolution of OSD menu is fixed to 1024X768 for the PC that is powered off or disconnected.
- 2. When the OSD menu pop up for the hot key, you will see the following small window on your monitor.

BANK: 1		
01 SYSTEM	01	02 ⊜SYSTEM 02 🌄
03 ☆SYSTEM	03	04 ⇔SYSTEM 04
05 ☆SYSTEM	05	06 SYSTEM 06
07 SYSTEM	07	08 ☆SYSTEM 08
09 SYSTEM	09	10 SYSTEM 10
11 \$SYSTEM	11	12 SYSTEM 12
13 SYSTEM	13	14 \$SYSTEM 14
15 \$SYSTEM	15	16 SYSTEM 16
OSD: 1 0 SEC. CHANGE PASSWORD		
SCAN: 1 0 SEC).	CONSOLE ON/OFF
ESC : QUIT		ENTER :COMPLETE
TAB: NEXT		INSERT :EDIT
★ / ▼ : PORT SELECT		
PgDn/PgUp: B	ANK	SELECT

- a. The 1ST line bar is Bank no.
- b. The 2nd column is your PC system name list. You will find the system number list from 01 to 04 (if the current box is 4 port) or from 01 to 8 (if the current box no. is 8 port) or from 01 to 16 (if the current box no. is 16 port). You can define your PC name in maximum 8 characters. The factory default of 16 port KVM switch PC name is from "SYSTEM 01", "SYSTEM 02" ,..., "SYSTEM 16" and 8 port KVM switch is from "SYSTEM 01", "SYSTEM 02",..., "SYSTEM 08". Besides, the sun symbol " \price " near to the PC name represents the PC system is powered on.

Use arrow keys " ★ " and " ▼ " to select port for destination PC name and press "ENTER" Key to switch to the PC port you want

Use "PgUp " key or "PgDn" key to select previous or next Bank no. (or Box No.)

BANK: 1

01 SYSTEM 01 02 \$\infty\$SYS EM 02 \$\infty\$

To press "INS" key for editing PC name.

After finishing the edit, please press "Enter "key for saving information.

Use "Tab "key to select items like Bank, OSD, SCAN, CHANGE PASSWORD, CONSOLE ON/OFF, etc...

15\$SYSTEM 15 16 SYSTEM 16

OSD:10SEC. CHANGE PASSWORD

SCAN:10SEC. CONSOLE ON/OFF

ESC:QUIT ENTER:COMPLETE

TAB:NEXT INSERT:EDIT

a. The "OSD: 10 SEC" means that PC system name exists 10 sec. on your monitor. You can modify it from 05 sec to 99 sec. The factory default value is 10 sec.. Please use "Esc" to dismiss the OSD windows display.

- b. The "SCAN TIME" means that scan interval from one PC port to next PC port. The default SCAN time is 10 sec and the maximum scan time is 99 sec. \
- c. The "CHANGE PASSWORD" is for user to avoid all PC systems to be intruded by the other person. The default password is 8 digits "00000000".

ESC: QUIT ENTER: COMPLETE

There is an enter password window showed out when you select this item and then press the Enter. The maximum password is eight digits. After you key in the password and press the Enter key, there is another window for confirming your typed password.

ENTER NEW PASSWORD:

ESC: QUIT ENTER: COMPLETE

RETYPE NEW PASSWORD:

ESC: QUIT ENTER: COMPLETE

You need to type the password again to check if your previous key-in password is matched or not.

NEW PASSWORD COMPLETE

ESC: QUIT ENTER: COMPLETE

- d. The "CONSOLE ON/OFF" means to manage the console users of KVM switch. If you select "CONSOLE ON", it means that any user can use the console. If you select "CONSOLE OFF" (factory default OFF state), it means that any user will not be allowed to use the console unless you enter the password. When you enter the password and pass the KVM switch authentication, the CONSOLE will be set to ON. After you finish using KVM switch, please don't forget to set CONSOLE ON state back to OFF state. If current CONSOLE is ON state and you reset KVM switch, the CONSOLE will be set as OFF state as the factory default.
- e. When you finish PC name setup and get out of OSD setting mode, you will find the PC name showed on the top of monitor. This mini OSD display will be dismissed according to the OSD time you set before.



f. If you want OSD returning back to factory default value, you can press "SCROLL LOCK", "SCROLL LOCK", and "R" keys. The mini OSD display on the monitor will be flashed during the refresh process.

ROM REFLASH

When the OSD value back to default setting, the midi OSD display on the monitor will be dismissed.

Troubleshooting

- 1. Make sure that all cables are well connected. Label all of cables with the number for each computer respectively to avoid confusion.
- To avoid ghosting and degradation, the recommended VGA cable distance is 5
 meters maximum. Normally, the cable length is based on driver capacity of your VGA
 card. If you need longer VGA cable, please use VGA extender to accomplish your
 applications.
- 3. The recommended PS/2 cable distance is 5 meters maximum. Normally, the cable length is based on driver capacity of your motherboard PS/2 port. If you need longer PS/2 cable, please use PS/2 extender to accomplish your applications.
- 4. Don't press any keys on the keyboard while the selected computer is booting up.

 Otherwise, it might cause the keyboard error or keyboard is not detected at PC side.
- 5. The computer boot up is fine, but keyboard doesn't work
- Make sure the keyboard works when it is directly plugged into the computer.
- Try a different keyboard, but use only 101, 102 or 104-key keyboard.
- 6. The Mouse is not detected during PC boot up.
- Make sure the mouse works when directly plugged into the computer.
- Make sure the mouse is a true PS/2 mouse. A combo mouse will work just as long as it is set for PS/2 mode with the correct adapter. Try a different mouse.
- Avoiding moving the mouse or pressing the mouse buttons when switching ports.
- Avoiding switching ports during shutting down the PC process.

- When you switch one PC port to another, please set the scan time for 5 sec at least. .
 Normally, it takes one or tow seconds for the VGA monitor to change from one resolution mode to another. So, the scan time is not recommended to be less than 5 seconds.
- 7. The power switch is off, but the switch still works fine or power adapter is unplugged from the switch, but the switch still works fine.

 KVM Switch unit draws the power source from power adapter and all PC's PS/2 port. Some PC's PS/2 port can support enough power for the switch, but some PC's PS/2 port (like laptop, notebook computer...etc.) is unable to supply enough power for the switch. In order to make sure the system can work steadily, please do not set power switch as off state or remove the power adapter from the switch.

 Although the PCs connected to KVM Switch unit are able to support enough power to the stand alone switch, KVM Switch unit still needs a power adapter for daisy chain more banks.
- 8. If you forget the "password" you typed, please contact your supplier.
- 9. CAT5 Console Receiver power LED is not ON, to make sure power adapter is connected to KVM CAT5 receiver.
- 10. No video signal is displayed on the remote monitor.
 - a. It might happen because VGA cables & connecter and CAT5 cable & connector is loosed or disconnected or VGA cable was not attached to computer during boot up process.
 - b. Or power adapter is not connected to receiver.
- 11. When video signal is foggy or un-cleared on the screen, please check if VGA connector is connected properly, or if the VGA resolution is too high for the length of cable being used. If the problem happened at VGA resolution, please shorten the CAT5 cable length or reduce VGA resolution. It is highly recommended to use "optimal CAT5 cable length "to get the best video quality and avoid wasting unnecessary CAT5 cable. VGA resolution is up to 1280X1024 and CAT5 cable length could up to 500 feet approximately.

CERTIFICATIONS

FCC

This equipment has been tested and found to comply with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

- (1) This device may not cause harmful interference
- (2) This device must accept any interference received. Including interference that may cause undesired operation.

CE - Certificate

This equipment is in compliance with the requirements of the following regulations: EN 55 022: CLASS B

